The Dow Chemical Company
Midland, Michigan 48674

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October 22, 2004

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(Attn: TSCA Section 8(e) Coordinator)
Office of Pollution Prevention and Toxics
Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460-0001

CONTAINS NO CBI

Re: 2,3,7,8-Tetrachlorodibenzo-p-dioxin
CASRN 1746-01-6

Dear Sir/Madam:

The following information is being submitted by The Dow Chemical Company (Dow) pursuant to current guidance issued by EPA indicating EPA's interpretation of Section 8(e) of the Toxic Substances Control Act. Dow has made no determination as to whether a significant risk of injury to health or the environment is actually presented by the findings.

Attached is an abstract from a submission to the Epidemiology in Occupational Health Conference October 13-16 held in Melbourne, Australia, titled, "Mortality in New Zealand Workers Exposed to Phenoxy Herbicides and Dioxins."

The submission reports an evaluation of mortality in New Zealand phenoxy herbicide producers and sprayers during periods of 1969(producers) and 1973 (sprayers) to 2000.

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The authors' conclusions are as follows:

"We observed 24% non-significant excess cancer mortality in phenoxy herbicide producers, with a significant excess for multiple myeloma. Associations were stronger for those exposed to multiple agents including dioxin during production. Overall cancer mortality was not increased for producers and sprayers mainly handling final technical products, although they were likely to have been exposed to TCDD levels far higher than those currently in the general New Zealand population."

Questions may be addressed to the undersigned.

Sincerely,

Linda C Burgert

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jt

Attachment

ABSTRACT TEMPLATE

Submission for EPICOH (Epidemiology in Occupational Health) conference, 13-16 October 2004 Melbourne

MORTALITY IN NEW ZEALAND WORKERS EXPOSED TO PHENOXY HERBICIDES AND DIOXINS

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Introduction: Chlorophenoxy herbicides have been produced and used extensively in New Zealand from the late 1950's until 1987. During production, 2,4,5-T and its intermediates (e.g. chlorophenols), are contaminated with the highly toxic 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD). Studies in occupationally or accidentally exposed populations have reported an increased risk of cancer, related to chlorophenoxy herbicides and TCDD. Here we evaluate mortality in New Zealand phenoxy herbicide producers and sprayers. **Methods:** Producers (n=1025) and sprayers (n=703) were followed up from 1/1/1969 and 1/1/1973 respectively to 31/12/2000. 813 Producers and 699 sprayers were classified as exposed to dioxin and phenoxy herbicides. Standardized mortality ratios (SMR) were calculated using national mortality rates. **Results:** At end of follow-up, 164 producers and 91 sprayers had died. Cancer mortality was reduced for sprayers (SMR=0.82, 95%CI 0.57-1.14) and elevated in exposed production workers (SMR=1.24, 95% CI 0.90-1.67), especially for synthesis workers (SMR=1.69), formulation and lab workers (SMR=1.64) and maintenance/waste-treatment/cleaning workers (SMR=1.46). Lymphohaematopoietic cancer mortality was elevated in exposed production workers (SMR=1.65, 95%CI 0.53-3.85), especially for multiple myeloma (SMR=5.51, 95%CI 1.14-16.1). Among sprayers, colon cancer (SMR=1.94, 95% CI 0.84-3.83) showed elevated mortality. **Conclusions:** We observed 24% non-significant excess cancer mortality in phenoxy herbicide producers, with a significant excess for multiple myeloma. Associations were stronger for those exposed to multiple agents including dioxin during production. Overall cancer mortality was not increased for producers and sprayers mainly handling final technical products, although they were likely to have been exposed to TCDD levels far higher than those currently in the general New Zealand population.

Topic: mortality studies

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Preferred Presentation Mode: Oral

I wish to be considered for the Young Investigator Award: No